"Summary of article By James Quirk and Rodney D. Fort: Why Do Pro Athletes Make So Much Money?" in Frontier Issues in Economic Thought, Volume 5: The Political Economy of Inequality. Island Press: Washington DC, 2000. pp. 90-95

Social Science Library: Frontier Thinking in Sustainable Development and Human Well-being

"Summary of article By James Quirk and Rodney D. Fort: Why Do Pro Athletes Make So Much Money?"

Within the past generation, professional sports have become a well-known new route to the top of the income distribution. Average salaries in major league baseball had reached $850,000 by 1991, about 12 times the $70,000 average (in 1991 dollars) that prevailed in the mid-1950s. This chapter addresses the obvious question, posed in its title, primarily through an analysis of the labor market for baseball players, with occasional comparisons to other sports. It focuses on the implications of the introduction of free agency in baseball in 1976, documenting the subsequent increase in financial rewards for small increments in performance, and finding that overall inequality among baseball players has risen sharply in the free agency era.

Pro Athletes as Entertainers

Since the mid-1970s, average salaries have risen rapidly in professional baseball, basketball and football, and to a lesser extent in hockey. A common perception among sports fans is that pro athletes are wildly overpaid, and that free agency – the players' right to switch to other teams when their contracts expire – is the culprit. However, salaries also rose sharply in football during the 1980s, despite much greater limitations on player mobility in the National Football League than in the baseball and basketball leagues. Other factors must be at work, including the impressive increases in both the demand for tickets to pro sports events, and the value of television rights.

Since pro athletes are in fact entertainers, one standard of salary comparison is to the top pay in other forms of entertainment. As of 1991, the most successful singers and movie stars had received much more than any athlete: Sylvester Stallone's $20 million for starring in *Rocky V*, and Janet Jackson's $15 million for her latest album, dwarfed baseball's top salaries of between $5 million and $6 million per season paid to Roger Clemens of the Boston Red Sox and Bobby Bonilla of the New York Mets.

Interestingly, the equivalent of free agency for movie performers, allowing them to switch studios from one film to the next, was only adopted in the 1950s – amid predictions (quite unfounded, in retrospect) that runaway star salaries would ruin the movie industry. Yet although the top salaries are higher in films and music, public resentment of high salaries is far more pronounced in sports.

The Workings of the Player Market

The market for professional athletes is characterized by extensive monopoly rents. A player's marginal revenue product (MRP), the amount he adds to the team's revenues, is generally greater than his reservation wage, or the amount he would earn in his next-best employment opportunity. The team owner will not pay more than the MRP, while the player will not work for less than his reservation wage; a process of bargaining determines precisely where, between these limits, the player's salary actually falls. The players' union establishes a minimum salary for major league teams, but does not negotiate individual salaries.

Before free agency, under the reserve clause that prevailed in baseball until 1976, a player could only negotiate with the team that owned his last contract. Under the reserve clause, therefore, the player's reservation wage was the maximum salary he could earn outside of baseball, or the league minimum salary, whichever is higher. After 1976, the reserve clause applied only to players in their first six years in the major leagues. After six years a player now becomes a free agent, and his reservation wage becomes the amount that another team is willing to pay him. Clearly the reservation wage is much higher, and much closer to MRP, under free agency; this limits the scope for bargaining. Conversely, there is more room for bargaining, and more potential for team owners to insist on salaries far below MRP, under the reserve clause. Today, individual players typically experience a jump in salary after their sixth year, when they become free of the reserve clause.

Ticket Price and Player Salaries

Do high player salaries drive up ticket prices? This common notion rests on an economic misconception. Profit-maximizing prices for tickets depend on fans' willingness to pay for tickets, but are independent of salaries. The owners' demand for inputs used to produce games, such as players, is derived from the ticket revenues. Thus it is more accurate to say that high ticket prices drive up salaries, by increasing players' MRPs.

Evidence against the common view that salaries drive ticket prices is provided by the history of prices before and after the 1976 introduction of free agency. Average salaries began to rise immediately after 1976, as one would expect. But ticket prices remained roughly constant or declining throughout the 1970s. The average real price of tickets was lower in 1980 than in 1971 for all but two major league baseball teams. In the 1980s, as salaries continued their rapid rise, ticket prices changed only modestly, and remained constant or declining in real terms for a number of teams. Players' MRPs rose in the 1980s primarily due to increased broadcast income, which allowed salaries to climb faster than ticket prices.

Salary Determination in Baseball

A simple statistical model shows that baseball salaries are highly correlated with standard measures of playing time, performance, age, experience, and related factors. Playing time is assumed to be an indicator of quality because managers play the better athletes more often. Performance is measured separately for hitters and pitchers (bases from base hits for hitters, ratio of strikeouts to walks for pitchers). Using relatively few variables, the model explains most of the variation in player salaries in each year.

The equation is estimated three times, once using a sample of players from 1965-74, in the reserve clause era; a second time for 1976-77, in the initial transition to free agency; and in a final version, for 1986-1990, well into the free agency years. Comparison of the estimates shows that playing time and performance elasticities (the gain in salary from a 1 percent change in playing time or performance) are much larger now than in the reserve clause years. Performance elasticities for players beyond their sixth year are 300 to 400 percent greater for hitters, and 200 to 300 percent greater for pitchers, than they were before 1976. That is, the salary gain for a 1 percent improvement in hitting is now three to four times as great.

The three estimates can also be used to calculate the change in salaries over time for a constant level of performance. For fifteen actual 1990 players, selected to represent a range of salary levels, the model predicts that their 1990 performance would have earned an average salary of $79,000 in 1969, $113,000 in 1976, and $707,000 in 1990 (all expressed in 1991 dollars). The big salary increases did not occur immediately after 1976, as would be expected if they simply reflected the value of free agency. Instead, the substantial increases were spread out over more than a decade, presumably reflecting the effects of free agency combined with the rising demand for baseball.

The Salary Distribution in Sports

A final calculation looks at the degree of inequality in the salary distribution in sports. The Gini coefficient for baseball salaries has risen over time: it averaged .354 in 1965-74, rose to .373 in 1976 and .457 in 1977, and averaged .510 in 1986-91. For 1991, the last year reported here, the baseball Gini was .539. While all players have benefitted from free agency, a disproportionate and growing share of the gains have gone to the top players. Those in their first six years of major league play, who remain under the reserve clause, have lost ground relative to their star teammates.

Data are available on the distribution of salaries in other major league sports for various years in the period 1988-90. During those years, the baseball salary Gini ranged from .494 to .529. The National Basketball Association had a Gini of .427, the National Football League had .411, and the National Hockey League was the most egalitarian at .284. This pattern is consistent with a ranking of the sports in terms of the degree of free agency, or player mobility, enjoyed by the players at the time. Baseball had the highest degree of mobility, followed by basketball. Football had much more limited free agency, and hockey had nearly none. The degree of free agency, in turn, reflects the relative strengths of the players' unions, ranging from strongest in baseball to weakest in hockey.